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# IMPORTANT FOREST TREES

OF

## THE EASTERN UNITED STATES



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THE EASTERN  
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# IMPORTANT FOREST TREES OF EASTERN UNITED STATES.

## KEY TO COMMON KINDS OF TREES.<sup>1</sup>

The following key is intended only as a guide in the identification of the more common kinds of trees. It is based on prominent, distinctive characteristics which can readily be observed by those who have no special training in botany. Most of the terms used require no explanation.

To use the key, decide first, by an examination of the leaf, in which of the following seven sections your tree belongs; then turn to that section, and from the descriptions there given determine what kind of tree it is.

	Section.
Trees with needles or scale-like leaves, mostly evergreens, bearing cones—	I
Trees with broad leaves:	
Leaves simple—	
Alternately attached to twigs—	
With toothed edges-----	II
Edges neither toothed nor notched-----	III
Opposite on twigs—	
With toothed edges-----	IV
Edges neither toothed nor notched-----	V
Leaves compound—	
Alternately attached to twigs-----	VI
Opposite on twigs-----	VII

## THE CONIFEROUS<sup>2</sup> TREES.

### I. TREES WITH NEEDLES OR SCALE-LIKE LEAVES, MOSTLY EVERGREEN, BEARING CONES.

#### A. Leaves needle-shaped:

##### (1) Leaves clustered—

- (a) Leaves long, from 1 to 18 inches, 2 to 5 in a cluster. Cones large, with many thick, woody scales----- (Pinus) Pine.
- (b) Leaves short (less than 2 inches long) in brush-like clusters of 12 to 40; falling off in winter. Cones very small, with thin scales; remaining on tree for one or more seasons----- (Larix) Larch.<sup>3</sup>

##### (2) Leaves single—

- (a) Leaves scattered around twigs; falling off when dry or dead. Cones elongated, with thin scales. Twigs roughened by leaf-scars.
  - (x) Leaves stiff, often sharp-pointed and more or less four-sided----- (Picea) Spruce.
  - (y) Leaves soft, flat, rounded, or notched at ends, the bases abruptly contracted into thread-like stems----- (Tsuga) Hemlock.
- (b) Leaves in two distinct rows, one on each side of the twig; falling off in late autumn or winter. Cones small, ball-like----- (Taxodium) Bald cypress.

<sup>1</sup> Reprinted from United States Department of Agriculture Bulletin 863: "Forestry Lessons on Home Woodlands."

<sup>2</sup> Cone-bearing.

<sup>3</sup> The larches are peculiar in having single, scattered leaves on the new or terminal twigs produced each season. These should not be mistaken for the "single" leaves borne throughout by other kinds of evergreens.

## A. Leaves needle-shaped—Continued.

## (2) Leaves single—Continued.

- (c) Leaves often in two rows on the tops and sides of the twigs; leaves on lower branches mostly flat, those on upper branches stouter. Cones long, erect, forming only on upper side of topmost branches; the scales falling off in autumn, leaving spike-like central axes of the cones attached.----- (Abies) Fir.

## B. Leaves scale-like, pointed, overlapping closely on flat or four-sided twigs.

- (1) Twigs four-sided. Cones round or ball-like, with small, thick scales; seed with very narrow, hard wings.--- (Cupressus) Cypress.

## (2) Twigs flattened.

- (a) Cones elongated, with only a few thin scales; bent back on branches.----- (Thuja) Arborvitæ.

- (b) Cones round, very small, berry-like with thin scales; seeds with a broad, thin wing on two sides.

(Chamæcyparis) Cedar.

- (c) Cones berry-like (showing no separation into scaly parts), Leaves either short, scale-like, and sharp-jointed, or much longer, needle-like, standing out loosely, and attached in pairs or in threes on the twigs.

(Juniperus) Juniper.

## THE BROADLEAF TREES.

## II. LEAVES SIMPLE, ALTERNATE, WITH TOOTHED EDGES.

## A. Leaves deeply lobed, or with large notches.

- (1) Leaves as wide as they are long. Fruit, a swinging ball, 1 to 1½ inches in diameter.

- (a) Leaves with finely toothed margins; star-shaped, the divisions pointed. Fruit, bur-like balls, from which, when ripe, small, winged seeds may be shaken. Bark rough.

(Liquidambar) Sweet gum.

- (b) Leaves with smooth margins, 3 to 5 inches long, pointed lobes, the space between the lobes rounded. Fruit, a rough ball, easily broken when ripe; composed of closely packed, long, narrow seeds which have hair-like bristles at their lower ends and are attached to a bullet-like central part. Old bark of trunks and large limbs peeling off in thin, curled pieces, leaving pale inner bark showing in irregular patches.---- (Platanus) Sycamore.

## (2) Leaves longer than wide.

- (a) Leaves large, with deep, round-topped, or pointed lobes. Fruit, an acorn, resting in a separable cup.

(Quercus) Oak.

- (b) Leaves small, with little, sharp teeth on margin. Twigs bearing sharp thorns. Fruit small (like a little apple), round, with bony seeds (hard core).

(Crataegus) Hawthorn.

## B. Leaves one-sided (one side of leaf shorter at base than the other side).

- (1) Leaves large, oval, 5 to 10 inches long, heart-shaped. Fruit, a cluster of small, woody balls  $\frac{1}{2}$  to  $\frac{1}{2}$  inch in diameter, hanging from a narrow, leaf-like blade.----- (Tilia) Basswood.



**B. Leaves one-sided—Continued.**

- (2) Leaves 3-veined at base, with long, tapering points, which generally turn to one side; edges smooth, or with small teeth of uniform size. Fruit, a small berry about  $\frac{1}{4}$  inch in diameter.

(Celtis) Hackberry.

- (3) Leaves with straight veins, oval; edges double-toothed (little teeth on the larger ones). Fruit in clusters, dry, flat, with papery wings all around the seeds.----- (Ulmus) Elm.

**C. Leaves even sided (both sides of leaf the same length).**

- (1) Leaves oval, evergreen thick, with short needle-like teeth. Fruit, a bright red berry.----- (Ilex) Holly.

- (2) Leaves more or less elongated, with one tooth at the end of each side vein.

- (a) Trees with smooth, bluish-gray bark, and long, pointed, chestnut-brown buds. Fruit, a small, three-cornered nut, in a spiny husk which splits open at the top into three parts.----- (Fagus) Beech.

- (b) Trees with ridged, grayish-brown bark. Fruit, a large, round nut in a thick husk covered with dense, needle-like spines; the husk splits open from the top into 3 or 4 divisions.----- (Castanea) Chestnut.

- (3) Leaves very narrow, finely toothed. Small branches slender, usually tough. Fruit, a long cluster of little pods filled with "cotton".----- (Salix) Willow.

- (4) Leaves somewhat triangular in outline, broad at base, large-toothed. Buds of some species coated with aromatic gum. Branches coarse. Fruit, a long cluster of little pods filled with "cotton." (Populus) Poplar.

- (5) Leaves oval, pointed, with saw-like teeth.

- (a) Fruit like a tiny pine cone.

- (x) Bark of trunk and branches peeling off in thin sheets. Leaves double-toothed (little teeth on the larger ones.) Fruit ("cones") scaly, falling apart when ripe; seeds with gauze-like wings on two sides.----- (Betula) Birch.

- (y) Bark smooth or broken, but not peeling. Leaves with small teeth. "Cones" hard, woody, not falling apart; seed with narrow wings on two sides.----- (Alnus) Alder.

- (b) Fruit, a berry; fleshy, edible.

- (x) Leaves large, 3-veined at base, often irregularly, deeply lobed; containing milky juice. Fruit similar in appearance to a blackberry.

(Morus) Mulberry.

- (y) Leaves small or medium-sized, feather-veined; containing green juice; fruit (cherry or plum) with one seed.

- (i) Seed ("stone") flattened. Fruit large and short-stemmed.---- (Prunus) Plum.

- (ii) Seed round. Fruit small and long-stemmed.----- (Prunus) Cherry.

## III. LEAVES SIMPLE, ALTERNATE, EDGE NEITHER TOOTHED NOR NOTCHED.

## A. Leaves with deep lobes.

- (1) Leaves with blunt ends (appearing as if cut off), and with two, pointed, side lobes. Flowers tulip-like. Fruit cone-like, pointed, upright, composed of long, thin, overlapping, winged seeds. Bruised twigs have a peppery odor. (Liriodendron) Tulip Poplar.
- (2) Leaves with rounded ends; oval, often with a lobe on one side, making the leaf mitten-shaped. Bruised twigs and inner bark of trunk sweet-smelling. (Sassafras) Sassafras.

## B. Leaves without lobes.

- (1) Bruised twigs with peppery odor.
  - (a) Leaves oval (evergreen in one species) or elongated, pointed, large. Flowers large, at ends of branches. Fruit cone-like, with a bright red seed in each division. (Magnolia) Magnolia.
- (2) Bruised twigs without peppery odor.
  - (a) Leaves broader at top than at the base, 8 to 12 inches long, with very short leafstalk. Fruit fleshy, elongated, 3 to 4 inches long, with thick, brown skin when ripe, and large, bony, flat seeds. Buds brown and hairy. (Asimina) Papaw.
  - (b) Leaves broadest at middle, oval, 3 to 10 inches long.
    - (x) Fruit short-stalked, round, 1 to 1½ inches in diameter; when ripe pale orange color, surrounded at base with old flower-cup; very bitter, but edible after frost. (Diospyros) Persimmon.
    - (y) Fruit long-stalked, elongated or round, solitary or in pairs, with thin flesh and a rigid stone or seed. (Nyssa) Gum.
  - (c) Leaves rounded or heart-shaped, 3 to 5 inches across. Flowers pea-like, pink, appearing before the leaves. Fruit, a dry flat pod, 2½ to 3½ inches long; in dense clusters on sides of branches; seeds, hard, small, oblong, ¼ inch long. (Cercis) Red bud.
- (3) Bruised or cut twigs and leaves with milky juice.
  - (a) Leaves with narrow points. Twigs bearing thorns. Fruit, a large, orange-like, rough ball, 4 to 6 inches in diameter. (Toxylon) Osage orange.

## IV. LEAVES SIMPLE, OPPOSITE, WITH TOOTHED EDGES.

- A. Leaves with large (often lobe-like) teeth. Fruit in pairs, each part with a conspicuous, flat, very thin wing. Fruit matures in spring or in autumn, when it becomes dry and yellowish-brown. (Acer) Maple.

## V. LEAVES SIMPLE, OPPOSITE, EDGES NEITHER TOOTHED NOR NOTCHED.

- A. Leaves very large, heart-shaped. Flowers showy, trumpet-like, in large clusters. Fruit, a long, cylindrical pod, 6 to 14 inches long, containing closely packed, flat, dry seeds, with fringed wings at each end. (Catalpa) Catalpa.
- B. Leaves rather small, oval, tapering at base and point. Flowers conspicuous, white (occasionally rosy), appearing with the expanding leaves. Fruit, a small cluster of two-seeded berries, turning red in autumn. (Cornus) Dogwood.



VI. LEAVES COMPOUND, ALTERNATELY ATTACHED TO TWIGS.

A. Leaflets small, many, attached along two sides of a main stem. Fruit, a flat, bean-like, dry or fleshy pod.

- (1) Leaflets with small, wavy teeth. Pods flat, broad, long, often twisted, thin-skinned, with thick, cheesy, sweetish pulp about seeds. Trees with long, keen, branched thorns.

(Gleditsia) Honey locust.

- (2) Leaflets not toothed.

(a) Twigs with pairs of short, keen thorns. Leaflets rounded at ends. Flowers showy white, in large clusters. Pods small, flat, thin, dry, with small seeds---(Robinia) Black locust.

(b) Twigs thornless. Leaflets oval, pointed. Flowers greenish, with violet odor. Pods large, flat, thick, with jelly-like pulp (poisonous) around the large, black-brown seeds.

(Gymnocladus) Coffee tree.

B. Leaflets large. Fruit, a hard-shelled nut, with a separable husk.

- (1) Leaflets narrow at base becoming larger at outer end. But light-colored, in a husk which separates more or less completely into four parts when ripe----- (Hicoria) Hickory.

- (2) Leaflets broad at base, becoming narrower at outer end. Nut dark, rough, in a fleshy husk which is inseparable by any natural divisions and turns black when old. Pith of twigs forms numerous cross-partitions ----- (Juglans) Walnut.

VII. LEAVES COMPOUND, OPPOSITE ON TWIGS.

A. Leaflets arranged along two sides of a main leafstalk, with a leaflet at the end.

- (1) Leaflets generally 3 (sometimes 5), toothed only near the ends. Fruit, a cluster of dry, winged seeds, arranged in pairs like those of maple----- (Acer) Boxelder.<sup>4</sup>

- (2) Leaflets generally more than 3 (3 to 11), and either not toothed or with small teeth. Fruit, a cluster of a single-winged, dry, oar-shaped "seeds"----- (Fraxinus) Ash.

B. Leaflets (5 to 9) clustered at end of a main leaf-stem. Fruit, a shiny, brown nut in a thick, warty or prickly husk, which separates into several parts----- (Æsculus) Buckeye.

ONE HUNDRED IMPORTANT EASTERN FOREST TREES.<sup>5</sup>

Name.	Distribution.	Remarks.
1. White pine ( <i>Pinus strobus</i> )..	Northeastern and Lake States and Appalachian Mountains	Fine timber tree; leaves in clusters of 5, 3 to 5 inches long.
2. Jack pine ( <i>Pinus divaricata</i> ) <sup>6</sup> ( <i>Pinus banksiana</i> ).	Northern tree, best growth north of Lake Superior.	Common on sandy soil; leaves in clusters of 2, $\frac{3}{4}$ to 1 $\frac{1}{2}$ inches long.
3. Red or Norway pine ( <i>Pinus resinosa</i> ).	Northern tree, associated with white pine.	Leaves in clusters of 2, 5 to 6 inches long.
4. Pitch pine ( <i>Pinus rigida</i> )....	Northeastern and middle Atlantic States.	Leaves in clusters of 3, 3 to 5 inches long.
5. Loblolly pine ( <i>Pinus taeda</i> )..	Southeastern States Coastal plain, Delaware to Texas.	Leaves in clusters of 3, 6 to 9 inches long. Cone, 2 to 3 inches in diameter.
6. Shortleaf pine ( <i>Pinus echinata</i> ).	Middle Atlantic and Southern States, with hardwood trees. Piedmont uplands, New Jersey to Texas.	Leaves in clusters of 2 and sometimes 3, 3 to 5 inches long. Cone small, 1 to 2 inches in diameter.

<sup>4</sup> Boxelder, a true maple, differs from the others in having compound leaves.

<sup>5</sup> Eastern half of United States. Most of these are important as commercial timber trees; a few, however, are small sized and included because of their botanical importance and wide occurrence in mixture with timber trees, particularly in second-growth forests.

<sup>6</sup> Some species are known by more than one scientific name because of lack of agreement among botanists. The first name given is to be preferred.

## ONE HUNDRED IMPORTANT EASTERN FOREST TREES—Continued.

Name.	Distribution.	Remarks.
7. Spruce pine ( <i>Pinus glabra</i> )..	Southeastern States along coast	Leaves in clusters of 2, $1\frac{1}{2}$ to 3 inches long.
8. Scrub pine, Jersey pine ( <i>Pinus virginiana</i> )..	Middle Atlantic States.....	Leaves in clusters of 2, $1\frac{1}{2}$ to 3 inches long.
9. Pond pine ( <i>Pinus serotina</i> )..	Southeastern States in Coastal Plain. Scattering.	Leaves 6 to 8 inches long, tree similar to pitch pine, but cones remain closed for several years. Cone rounded.
10. Slash pine (Cuban pine) ( <i>Pinus caribæa</i> )..	Southeastern States in poorly drained soils; uplands in Georgia, associated with longleaf pine.	Leaves in clusters of 2, sometimes 3, 8 to 12 inches long. Important turpentine tree.
11. Longleaf pine ( <i>Pinus palustris</i> )..	South Atlantic and Gulf States.	Leaves in clusters of 3, 8 to 18 inches long. Important turpentine tree.
12. Tamarack or Larch ( <i>Larix laricina</i> , <i>Larix americana</i> )..	Northeastern States, best growth in Canada.	Leaves needle-shape, $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, in dense brush-like clusters, falling off in winter.
13. White spruce ( <i>Picea canadensis</i> )..	Northeastern States and in northern Rocky Mountains.	Leaves $\frac{1}{2}$ to $\frac{3}{4}$ inch long, arranged singly around the smooth twigs.
14. Black spruce ( <i>Picea mariana</i> )..	Northeastern States.....	Similar to white spruce, but twigs are minutely hairy.
15. Red spruce ( <i>Picea rubra</i> )....	Northeastern States and Appalachian Mountains.	Similar to black spruce, but cones remain attached to twigs when ripe.
16. Hemlock ( <i>Fsuga canadensis</i> )..	Northern and Eastern States.	Leaves $\frac{1}{2}$ to $\frac{3}{4}$ inch long, attached by tiny leaf-stalks; cones $\frac{1}{2}$ to $\frac{3}{4}$ inch long.
17. Bald cypress (Southern cypress) ( <i>Taxodium distichum</i> )..	South Atlantic and Gulf States in swamps.	Leaves $\frac{1}{2}$ to $\frac{3}{4}$ inch long, falling off in winter; cones bell-like.
18. Balsam fir ( <i>Abies balsamea</i> )..	Northeastern States to south-west Virginia.	Leaves $\frac{1}{2}$ to $1\frac{1}{2}$ inches long; cones falling to pieces when ripe.
19. Fraser fir ( <i>Abies balsamea</i> )..	High southern Appalachian Mountains.	Similar to balsam fir, except cones which are "scale-covered."
20. Arborvitæ ( <i>Thuja occidentalis</i> )..	Northeastern States.....	Leaves scale-like; cones $\frac{1}{2}$ to $\frac{3}{4}$ inch long, bent backward on twigs.
21. White cedar ( <i>Chamæcyparis thyoides</i> )..	Swamps of eastern and Gulf Coast.	Cones ball-like, leaves resembling arborvitæ.
22. Red cedar or juniper ( <i>Juniperus virginiana</i> )..	Eastern United States.....	Leaves scale-like, those on young shoots and seedlings awl-shaped; cones changed into a soft berry.
23. Sweet gum (Red gum) ( <i>Liquidambar styraciflua</i> )..	Southeastern States.....	Leaves star-shape, fruit a bur-like ball suspended by a long stalk.
24. Sycamore or Buttonwood ( <i>Platanus occidentalis</i> )..	Eastern United States.....	Leaves broad and coarsely toothed; base of leafstalk inclosing winter bud in peculiar manner; fruit a hard surfaced, long-stalked ball.
25. White oak ( <i>Quercus alba</i> )....	.....do.....	Leaves deeply lobed, not bristle-tipped; acorns ripening in one season.
26. Bur oak ( <i>Quercus macrocarpa</i> )..	Northeastern United States, Wyoming.	A white oak with fringe-edged acorn and leaves more deeply lobed toward their base.
27. Overcup oak ( <i>Quercus lyrata</i> )..	Southeastern United States...	A white oak with acorns completely or almost covered by the acorn cup.
28. Post oak (Box oak) ( <i>Quercus minor</i> )..	Eastern United States.....	A white oak with leaves cut deeply above and below the middle lobes, forming the suggestion of a cross.
29. Chestnut oak ( <i>Quercus prinus</i> )..	Northeastern States and Appalachian Mountains. Common on ridges.	A white oak with leaves resembling those of the chestnut.
30. Red oak ( <i>Quercus rubra</i> )....	Eastern United States.....	Leaves deeply cut, with bristle-tipped points; acorns ripening in 2 seasons, with acorn cups very shallow.
31. Black oak ( <i>Quercus velutina</i> )..	.....do.....	A red oak with thicker leaves which are minutely woolly beneath; acorns with cups as deep or deeper than wide.
32. Pin oak ( <i>Quercus palustris</i> )..	.....do.....	A red oak with smaller leaves and smaller and shallower cupped acorns.
33. Southern Red or Spanish Oak ( <i>Quercus digitata</i> , <i>Quercus falcata</i> )..	Central and Southeastern States.	A red oak with leaves very deeply cut, the upper central portion being very narrow and sometimes slightly curved. Abundant.
34. Water oak ( <i>Quercus nigra</i> )...	Southeastern United States...	Leaves not toothed, with large terminal lobe, sometimes 3-lobed. Acorns with shallow cup. Much planted as street tree throughout South.
35. Willow oak ( <i>Quercus phellos</i> )..	Eastern United States.....	A red oak with leaves not toothed nor lobed; but resembling a smooth-edged willow or peach leaf. Much planted as street shade tree in Southern States.
36. Live oak ( <i>Quercus virginiana</i> )..	Southern States.....	An evergreen oak with leaves not toothed nor notched; acorns with long stalks.



## ONE HUNDRED IMPORTANT EASTERN FOREST TREES—Continued.

Name.	Distribution.	Remarks.
37. Basswood or Linden ( <i>Tilia americana</i> ).	Eastern United States.....	Leaves broadly heart-shaped with finely toothed edge; fruit a cluster of little woody balls suspended from the middle of a long narrow leaf.
38. White basswood ( <i>Tilia heterophylla</i> ).	Middle and South Atlantic States.	Similar to basswood excepting that the leaves are whitish or minutely woolly beneath.
39. Hackberry (Sugarberry) ( <i>Celtis occidentalis</i> ).	Eastern United States and west to New Mexico and Oregon.	Leaves finely toothed; long pointed; fruit a long stalked, single-seeded berry with very thin flesh.
40. White elm ( <i>Ulmus americanus</i> ).	Eastern United States.....	Leaves sharply toothed; fruit flat, papery, about $\frac{1}{2}$ inch long, fringed, around with tiny hairs.
41. Slippery elm ( <i>Ulmus fulva</i> , <i>Ulmus pubescens</i> ).	.....do.....	Similar to white elm, but inner bark is slippery and the flat fruits have a smooth edge.
42. Cork elm ( <i>Ulmus racemosa</i> ).	.....do.....	Differing from other elms in having fruit minutely hairy all over, not merely around edges. Twigs with corky ridges.
43. Holly ( <i>Ilex opaca</i> ).	.....do.....	Evergreen tree with leaves with large spiny teeth, and fruit a bright red berry remaining attached through the winter. Small tree.
44. Beech ( <i>Fagus americana</i> , <i>Fagus atropunicea</i> ).	.....do.....	Leaves with saw-tooth edge; fruit a light brown nut, ripening and falling from spine covered hull in late summer.
45. Chestnut ( <i>Castanea dentata</i> ).	Northeastern and middle Atlantic States.	Leaves with sharp, forward pointing teeth; fruit, a cluster of nuts surrounded with a very spiny hull. A plant disease is rapidly killing chestnut timber.
46. Chinquapin ( <i>Castanea pumila</i> ).	Middle and Southern States...	Leaves smaller than chestnut and finely woolly beneath; but one nut in the spiny husk. Mostly known as a shrub but reaches tree size.
47. Black willow ( <i>Salix nigra</i> ).	Eastern United States.....	Leaves slender, long pointed, and finely toothed. The largest of our willows, difficult to distinguish from dozens of other kinds of willow.
48. Balm of Gilead (Balsam poplar) ( <i>Populus balsamifera</i> ).	Northern United States.....	Leaves very broad at base, toothed, with round leafstalk.
49. Cottonwood (Carolina poplar) ( <i>Populus deltoides</i> ).	Eastern United States.....	Leaves resembling Balm of Gilead, but with flattened leafstalk.
50. Swamp cottonwood ( <i>Populus heterophylla</i> ).	South Atlantic and Gulf States.	Leaves with round leafstalk minutely woolly on underside when young.
51. Aspen ("popple") ( <i>Populus tremuloides</i> ).	Northern and Western United States.	Leaves broad, finely toothed, leafstalks flat, longer than blades.
52. Big-toothed aspen ( <i>Populus grandidentata</i> ).	Northeastern United States...	Leaves broad, coarsely toothed, with flattened leafstalks.
53. Paper birch ( <i>Betula papyrifera</i> ).	Northern United States.....	Leaves broad at base, finely toothed, fruit a papery cone which falls apart when ripe, bark peeling off in thin sheets.
54. Sweet birch ( <i>Betula lenta</i> ).	Northeastern United States...	Bark dark brown, hard and close, not peeling off in sheets, tiny scales of cones smooth, not minutely hairy along edges as in yellow birch.
55. Yellow birch ( <i>Betula lutea</i> ).	Eastern United States.....	Bark yellow gray, tiny scales of the cones minutely hairy along edges.
56. Red mulberry ( <i>Morus rubra</i> ).	.....do.....	Leaves heart-shaped, sharply toothed. Fruit red or black. The white mulberry comes from Asia.
57. Wild plum ( <i>Prunus americana</i> ).	.....do.....	Leaves pointed, finely toothed, fruit red or yellow with short stalks. Branches somewhat spiny. Calyx-lobes of flowers with smooth edge. Small tree or shrub.
58. Wild red cherry ( <i>Prunus pennsylvanica</i> ).	.....do.....	Fruit bright red when ripe, long stalked in clusters of 3 to 5.
59. Choke cherry ( <i>Prunus virginiana</i> ).	.....do.....	Fruit in a long cluster, ripe berries mostly at base, no remains of flower persisting.
60. Wild black cherry ( <i>Prunus serotina</i> ).	.....do.....	Fruit resembles choke cherry, but with remains of flower attached to base of the cherries.
61. Yellow or tulip poplar ( <i>Liriodendron tulipifera</i> ).	.....do.....	Leaves large, blunt or with deep notch at end; flowers large; yellow, fruit a woody cone.
62. Sassafras ( <i>Sassafras sassafras</i> ).	.....do.....	Leaves oval, with one lobe like a "mitten," or with a lobe on each side. Twigs fragrant.



## ONE HUNDRED IMPORTANT EASTERN FOREST TREES—Continued.

Name.	Distribution.	Remarks.
63. Black gum (Pepperidge) ( <i>Nyssa sylvatica</i> ).	Eastern United States.....	Leaves oval with smooth edge. Fruit, an elongated berry with seed but little flattened and stone scarcely ridged.
64. Water gum ( <i>Nyssa biflora</i> )...	Southern States.....	Resembling black gum, but fruit which also grows in pairs, has a flattened and ridged stone.
65. Tupelo gum ( <i>Nyssa aquatica</i> ). Known also as cotton gum. Associated with cypress.	Swamps of Southeastern Coastal States.	Fruits produced singly, with a stalk longer than the fruit; stone of fruit sharp-edged or winged.
66. Gopher plum ( <i>Nyssa ogeche</i> ).	Swamps, South Carolina to Florida.	Resembling Tupelo gum, but fruits with stalks shorter than the fruit itself.
67. Sweet magnolia ( <i>Magnolia virginiana</i> , <i>Magnolia glauca</i> ). Known also as Sweet Bay.	Coastal swamps, Eastern and Gulf States.	Flowers white. Leaves white, silky beneath.
68. Cucumber tree ( <i>Magnolia acuminata</i> ).	Eastern United States.....	Flowers greenish-yellow. Fruit slender.
69. Umbrella tree ( <i>Magnolia fraseri</i> ).	Southeastern States.....	Flowers white, leaves deeply lobed at base, forming "ears," green on under side.
70. Large-leaf magnolia ( <i>Magnolia macrophylla</i> ).	.....do.....	Flowers white, leaves very large, with "ears" at base, and white beneath. Largest leaved tree in North America (20 to 30 inches long).
71. Persimmon ( <i>Diospyros virginiana</i> ).	Eastern United States.....	Leaves oval, smooth, with smooth margin, fruit orange colored, 1 to 1½ inches in diameter, edible in late fall.
72. Redbud (Judas tree) ( <i>Cercis canadensis</i> ).	.....do.....	Leaves heart-shaped, smooth margin; fruit a pea-like pod in clusters of 4 to 8; flowers resembling a small rose-colored sweet pea.
73. Osage orange (Bois d'arc) ( <i>Toxylon pomiferum</i> ).	Native to Arkansas, eastern Oklahoma and Texas, but widely planted throughout eastern United States.	Leaves with smooth edges. Fruit a heavy ball 4 to 5 inches in diameter.
74. Sugar maple ( <i>Acer saccharum</i> )	Eastern United States.....	Leaves 3 to 5 lobed with large rounded teeth; fruit a pair of keys ripening in autumn.
75. Silver maple ( <i>Acer saccharinum</i> ).	.....do.....	Leaves deeply 5-lobed, with sharp irregular teeth; fruit ripening in spring before appearance of leaves.
76. Red maple ( <i>Acer rubrum</i> )...	.....do.....	Leaves 3 to 5 lobed, finely toothed; fruit ripening in spring or early summer.
77. Box elder or ash-leaved maple ( <i>Acer negundo</i> ).	Throughout United States....	Leaves compound, the leaflets toothed; fruit ripening in early summer.
78. Hardy catalpa (Indiancigar) ( <i>Catalpa speciosa</i> ).	South Central States, widely cultivated elsewhere.	Leaves large, heart-shaped; fruit a long "pod" filled with flat seeds which are tufted at each end. A better shaped tree than common catalpa ( <i>Catalpa catalpa</i> ).
79. Flowering dogwood ( <i>Cornus florida</i> ).	Eastern United States.....	Leaves mostly clustered at ends of branches, with slightly wavy margins; flowers white with four large bracts resembling petals. Leaves opposite.
80. Blue dogwood ( <i>Cornus alternifolia</i> ).	Northeastern States and Appalachian Mountains.	Leaves resembling those of flowering dogwood, but alternate in arrangement; flowers without the four large petal-like bracts.
81. Honey locust ( <i>Gleditsia triacanthos</i> ).	Central States and Minnesota to Texas. Widely cultivated elsewhere.	Leaves doubly-compound, the leaflets with slightly wavy margins; fruit a pod a foot or more in length, twisted when dry. Trees with large branching thorns.
82. Black locust (Yellow locust) ( <i>Robinia pseudacacia</i> ).	Appalachian region, widely cultivated and naturalized all over United States.	Leaves compound, leaflets with smooth margins; fruit a pod 3 to 4 inches long. Trees with pairs of short thorns at the base of leaves and twigs. Wood heavy and durable in the ground.
83. Kentucky coffee tree ( <i>Gymnocladus dioica</i> ).	Ohio and Mississippi valley...	Leaves doubly compound, the leaflets with entire margins; fruit a large wide pod, 6 to 10 inches long, 1½ to 2 inches wide. Trees without thorns.
84. Pecan ( <i>Hicoria pecan</i> ).....	Mississippi Valley.....	Bud scales few, shell of nut thin and brittle, with large cavities; nuts elongated with sweet kernel.
85. Bitternut hickory ( <i>Hicoria minima</i> ).	Eastern United States.....	Nut broader than long, with bitter kernel.

ONE HUNDRED IMPORTANT EASTERN FOREST TREES—Continued.

Name.	Distribution.	Remarks.
86. Water hickory ( <i>Hicoria aquatica</i> ).	Gulf States and lower Mississippi Valley.	Nut broad, with bitter kernel.
87. Shagbark hickory ( <i>Hicoria ovata</i> ).	Eastern United States.....	Buds with many scales (all of the preceding hickories have buds with few scales), nuts not flanged at joints, shell thick and bony. Bark loosening from trees.
88. Shellbark hickory ( <i>Hicoria laciniosa</i> ).	.....do.....	Difficult to distinguish from shagbark hickory. Twigs are pale orange, while in the preceding they are light red-brown.
89. Mockernut hickory ( <i>Hicoria alba</i> ).	.....do.....	Bud scales many, bark closely furrowed not separating from the trunk. Nut oblong.
90. Pignut hickory ( <i>Hicoria glabra</i> ).	Southern States.....	Like preceding in many respects* Nuts not elongated.
91. Black walnut ( <i>Juglans nigra</i> ).	Eastern United States.....	Leaves compound, with toothed edges fruit growing singly or in pairs rounded; bark brown.
92. Butternut or white walnut ( <i>Juglans cinerea</i> ).	.....do.....	Leaves compound, with toothed edges; fruit in hanging clusters of 3 to 5, pointed and elongated. Velvety cushion just above leaf-scar; bark gray.
93. White ash ( <i>Frazinus americana</i> ).	.....do.....	All species of ash are difficult to identify, and mostly require expert knowledge of the fruit or "keys." White ash has a key or fruit with a plump well rounded body and a wing extending almost entirely from the end.
94. Red ash ( <i>Frazinus pennsylvanica</i> ).	.....do.....	Differs from white ash in having young twigs velvety and wing of seed extending down along sides of seed-body.
95. Green ash ( <i>Frazinus lanceolata</i> ).	.....do.....	Like the preceding, except twigs are smooth.
96. Pumpkin ash ( <i>Frazinus profunda</i> ).	Southern States.....	Resembling red ash, but fruits are very much larger, sometimes twice the size.
97. Blackash ( <i>Frazinus nigra</i> ).	Northern and Lake States....	Fruits with a flat wide wing, which extends conspicuously down the sides of the seed body.
98. Water ash ( <i>Frazinus caroliniana</i> ).	Southeastern States.....	Fruits very wide and flat, frequently 3-winged.
99. Ohio Buckeye ( <i>Æsculus glabra</i> ).	Ohio and Mississippi Valleys..	Leaves palmately compound; fruit in a knobby husk.
100. Yellow Buckeye ( <i>Æsculus octandra</i> ).	.....do.....	Resembling preceding, but fruit in a smooth husk.



